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12822A LANCE, MISSILE NUMBER 4382, ROUND NUMBER 345ECL.(U)
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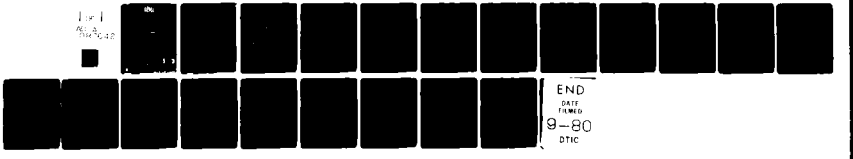

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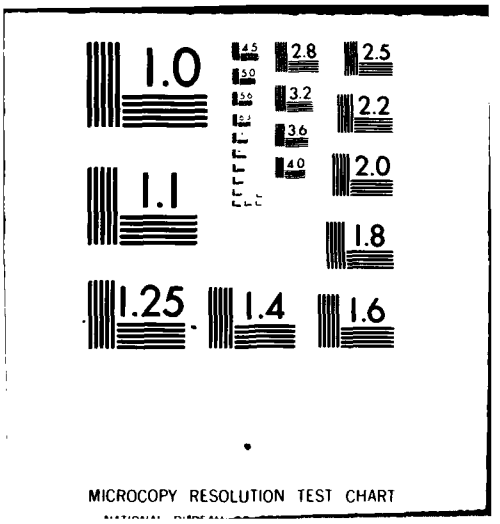
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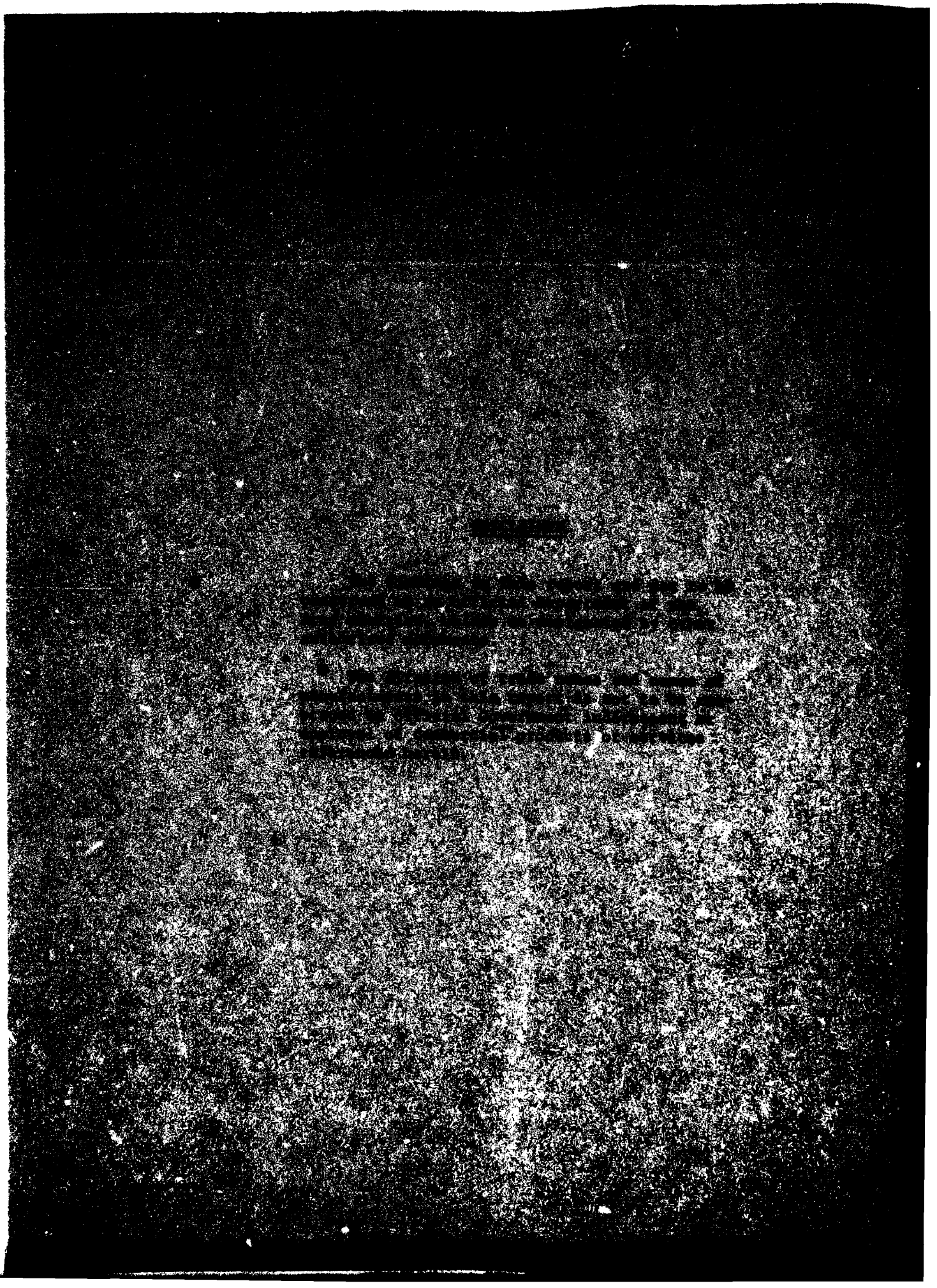

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 12822A LANCE, Missile Number 4382, Round Number 345ECL, are presented in tabular form.

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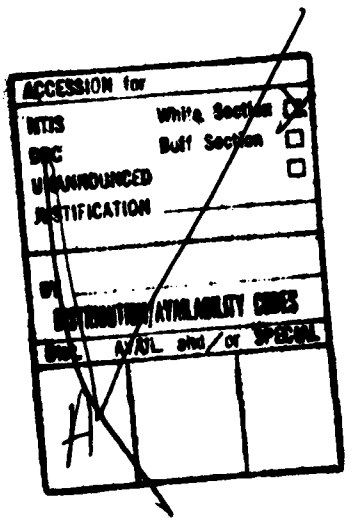
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CONTENTS

## INTRODUCTION

12822A LANCE, Missile Number 4382, Round Number 345 ECL, was launched from Red Rio, White Sands Missile Range (WSMR), New Mexico, at 0737 MST on 25 April 1980. The scheduled launch time was 0730 MST.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{o}C$), relative humidity, dew point ($^{o}C$), density ($gm/m^3$), Wind direction and speed, and cloud cover were made at the Red Rio Met Site at T-0 minutes.

(2) **Monitor of wind speed and direction from one anemometer was provided in the launch control room.**

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-0 pibal observation at:

SITE AND ALTITUDE

**Not available - radar inoperative.**

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to as high as possible in 500-feet increments.

| SITE AND TIME | |
|---|---|
| **Red Rio** | **0800 MST** |
| **Jallen** | **0755 MST** |

TABLE 1. **Surface Observations Taken at 0737 MST, 25 April 1980, at Red Rio, 12822A LANCE, Missile Number 4382, Round Number 345 ECL.**

| | | |
|---|---|---|
| ELEVATION | 6332 | FT/MSL |
| PRESSURE | 802.6 | MBS |
| TEMPERATURE | 3.6 | $^{o}C$ |
| RELATIVE HUMIDITY | 70 | % |
| DEW POINT | - 1.4 | $^{o}C$ |
| DENSITY | 1007 | $GM/M^3$ |
| WIND SPEED | 02 | KTS |
| WIND DIRECTION | 330 | DEGREES |
| CLOUD COVER | 6 | Ac |

STATION ALTITUDE 6331.86 FEET MSL
25 APR. 80 0800 HRS MST
ASCENSION NO. 2

SIGNIFICANT LEVEL DATA
1160350002
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 2.

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|---|---|---|---|---|
| 803.0 | 6331.9 | 4.5 | .1 | 73.0 |
| 792.8 | 6673.1 | 2.6 | -1.2 | 76.0 |
| 700.0 | 9935.0 | -5.4 | -9.1 | 75.0 |
| 656.4 | 11585.8 | -8.3 | -10.7 | 83.0 |
| 629.4 | 12657.0 | -8.7 | -16.7 | 52.0 |
| 612.0 | 13371.6 | -8.5 | -19.1 | 42.0 |
| 561.0 | 15574.8 | -12.2 | -18.7 | 58.0 |
| 544.0 | 16347.0 | -13.3 | -21.7 | 49.0 |
| 511.0 | 17903.2 | -16.9 | -22.0 | 61.0 |
| 500.0 | 18440.0 | -17.4 | -26.2 | 46.0 |
| 441.2 | 21453.7 | -24.0 | -29.4 | 61.0 |
| 434.8 | 21834.4 | -24.2 | -30.6 | 54.0 |
| 400.0 | 23916.2 | -29.1 | -36.0 | 48.0 |
| 377.2 | 25186.6 | -32.7 | -38.5 | 56.0 |
| 356.8 | 26467.4 | -35.6 | -44.3 | 40.0 |
| 324.2 | 28637.1 | -40.9 | -48.7 | 42.0 |
| 300.0 | 30358.9 | -45.0 | | |
| 250.0 | 34291.9 | -53.9 | | |
| 246.1 | 34624.6 | -53.7 | | |
| 240.9 | 35080.6 | -49.9 | | |
| 232.0 | 35892.5 | -49.2 | | |
| 211.8 | 37848.4 | -52.0 | | |
| 203.6 | 38671.9 | -51.0 | | |
| 200.0 | 39078.2 | -47.8 | | |
| 196.0 | 39518.6 | -46.7 | | |
| 170.6 | 42520.6 | -51.4 | | |
| 162.0 | 43630.3 | -50.4 | | |
| 150.0 | 45281.7 | -51.4 | | |
| 127.0 | 48813.1 | -55.5 | | |
| 119.6 | 50042.9 | -54.5 | | |
| 100.0 | 53321.7 | -58.8 | | |
| 90.2 | 55962.8 | -57.9 | | |
| 70.0 | 61193.4 | -61.6 | | |
| 59.6 | 64474.2 | -62.9 | | |
| 50.0 | 68085.8 | -58.3 | | |
| 37.0 | 74379.7 | -56.1 | | |
| 30.0 | 78845.9 | -50.4 | | |

STATION ALTITUDE 6331.66 FEET MSL
25 APR. 60 0800 HRS MST
ASCENSION NO.

UPPER AIR DATA
1160350006
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3.

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES($T_w$) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 6331.9 | 803.0 | 4.5 | .1 | 73.0 | 1004.6 | 650.1 | 330.0 | 6.0 | 1.000254 |
| 6500.0 | 798.0 | 3.6 | -.5 | 74.5 | 1001.8 | 649.0 | 341.3 | 6.5 | 1.000252 |
| 7000.0 | 783.0 | 1.8 | -2.0 | 75.9 | 989.5 | 646.8 | 4.4 | 9.0 | 1.000247 |
| 7500.0 | 768.2 | .6 | -3.2 | 75.7 | 975.3 | 645.3 | 16.4 | 12.3 | 1.000242 |
| 8000.0 | 753.7 | -.7 | -4.4 | 75.6 | 961.4 | 643.8 | 23.2 | 15.8 | 1.000237 |
| 8500.0 | 739.4 | -1.9 | -5.6 | 75.4 | 947.6 | 642.3 | 29.2 | 17.1 | 1.000232 |
| 9000.0 | 725.4 | -3.1 | -6.8 | 75.3 | 934.0 | 640.8 | 32.7 | 15.8 | 1.000227 |
| 9500.0 | 711.7 | -4.3 | -8.1 | 75.1 | 920.7 | 639.3 | 37.3 | 15.8 | 1.000223 |
| 10000.0 | 698.2 | -5.5 | -9.2 | 75.3 | 907.3 | 637.9 | 30.7 | 16.7 | 1.000218 |
| 10500.0 | 684.8 | -6.4 | -9.6 | 77.7 | 892.8 | 636.8 | 23.0 | 16.8 | 1.000215 |
| 11000.0 | 671.6 | -7.3 | -10.1 | 80.2 | 878.5 | 635.7 | 16.0 | 16.8 | 1.000211 |
| 11500.0 | 658.6 | -8.1 | -10.6 | 82.6 | 864.4 | 634.7 | 10.8 | 17.4 | 1.000207 |
| 12000.0 | 645.8 | -8.5 | -12.7 | 71.0 | 848.8 | 633.2 | 5.9 | 18.3 | 1.000201 |
| 12500.0 | 633.3 | -8.6 | -15.7 | 56.5 | 833.2 | 631.9 | 359.8 | 20.7 | 1.000195 |
| 13000.0 | 621.0 | -8.6 | -17.8 | 47.2 | 817.0 | 630.9 | 356.1 | 22.8 | 1.000190 |
| 13500.0 | 608.9 | -8.7 | -19.0 | 42.9 | 801.5 | 629.8 | 355.1 | 24.1 | 1.000186 |
| 14000.0 | 597.0 | -9.6 | -18.8 | 46.6 | 788.3 | 628.8 | 355.0 | 25.4 | 1.000183 |
| 14500.0 | 585.3 | -10.4 | -18.7 | 50.2 | 775.3 | 627.8 | 357.7 | 26.5 | 1.000180 |
| 15000.0 | 573.9 | -11.2 | -18.7 | 53.8 | 762.6 | 626.8 | 356.8 | 27.2 | 1.000178 |
| 15500.0 | 562.7 | -12.1 | -18.7 | 57.5 | 750.1 | 625.8 | 353.5 | 27.8 | 1.000175 |
| 16000.0 | 551.6 | -12.8 | -20.3 | 53.0 | 737.4 | 624.8 | 352.4 | 27.8 | 1.000171 |
| 16500.0 | 540.7 | -13.7 | -21.8 | 50.2 | 725.3 | 623.8 | 352.1 | 27.8 | 1.000168 |
| 17000.0 | 529.9 | -14.8 | -22.0 | 54.0 | 714.0 | 622.8 | 354.0 | 29.3 | 1.000165 |
| 17500.0 | 519.4 | -16.0 | -22.3 | 57.9 | 703.0 | 621.8 | 355.4 | 30.8 | 1.000162 |
| 18000.0 | 509.0 | -17.0 | -23.2 | 58.3 | 691.7 | 620.7 | 354.0 | 32.1 | 1.000160 |
| 18500.0 | 498.8 | -17.5 | -26.2 | 46.3 | 679.4 | 619.6 | 353.1 | 33.5 | 1.000155 |
| 19000.0 | 488.6 | -18.6 | -26.7 | 48.8 | 668.4 | 618.7 | 356.8 | 34.9 | 1.000153 |
| 19500.0 | 478.7 | -19.7 | -27.2 | 51.2 | 657.6 | 617.8 | .0 | 36.4 | 1.000150 |
| 20000.0 | 468.9 | -20.8 | -27.7 | 53.7 | 647.0 | 616.8 | 2.4 | 37.8 | 1.000148 |
| 20500.0 | 459.4 | -21.9 | -28.2 | 56.2 | 636.6 | 615.7 | 3.0 | 39.0 | 1.000145 |
| 21000.0 | 450.1 | -23.0 | -28.8 | 58.6 | 626.3 | 614.7 | 359.2 | 39.9 | 1.000143 |
| 21500.0 | 440.9 | -24.0 | -29.4 | 60.7 | 616.2 | 613.7 | 354.7 | 41.8 | 1.000140 |
| 22000.0 | 431.8 | -24.6 | -31.3 | 53.5 | 605.0 | 612.6 | 349.9 | 44.8 | 1.000137 |
| 22500.0 | 422.8 | -25.8 | -32.8 | 52.0 | 595.4 | 611.6 | 348.0 | 46.6 | 1.000135 |
| 23000.0 | 414.0 | -27.1 | -34.2 | 50.5 | 585.9 | 610.5 | 342.7 | 47.8 | 1.000133 |
| 23500.0 | 405.4 | -28.3 | -35.7 | 49.0 | 576.6 | 609.5 | 340.0 | 47.4 | 1.000130 |
| 24000.0 | 396.9 | -29.6 | -36.8 | 49.1 | 567.5 | 608.4 | 338.5 | 47.1 | 1.000128 |
| 24500.0 | 388.5 | -30.9 | -37.5 | 52.0 | 558.5 | 607.4 | 337.7 | 46.9 | 1.000126 |
| 25000.0 | 380.2 | -32.2 | -38.2 | 54.9 | 549.6 | 606.4 | 338.7 | 47.5 | 1.000124 |
| 25500.0 | 372.1 | -33.4 | -39.8 | 52.1 | 540.6 | 605.3 | 339.2 | 47.8 | 1.000122 |

STATION ALTITUDE 6331.80 FEET MSL
25 APR. 80 0800 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
1160350002
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3 (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 26000.0 | 304.1 | -34.5 | -42.1 | 45.8 | 531.5 | 601.8 | 337.4 | 47.0 | 1.000119 |
| 26500.0 | 296.3 | -35.7 | -44.4 | 40.0 | 522.6 | 600.4 | 335.2 | 46.5 | 1.000117 |
| 27000.0 | 288.5 | -36.9 | -45.4 | 40.5 | 513.8 | 598.8 | 332.5 | 46.5 | 1.000115 |
| 27500.0 | 280.9 | -38.1 | -46.4 | 41.0 | 505.2 | 597.3 | 330.8 | 47.2 | 1.000113 |
| 28000.0 | 273.5 | -39.3 | -47.4 | 41.4 | 496.8 | 595.7 | 330.3 | 48.6 | 1.000111 |
| 28500.0 | 266.2 | -40.6 | -48.5 | 41.9 | 488.5 | 594.2 | 332.0 | 48.8 | 1.000109 |
| 29000.0 | 258.9 | -41.8 | -51.6 | 33.1** | 480.2 | 592.6 | 335.3 | 48.1 | 1.000107 |
| 29500.0 | 251.8 | -43.0 | -56.4 | 21.0** | 471.9 | 591.1 | 340.2 | 49.0 | 1.000105 |
| 30000.0 | 244.9 | -44.1 | -64.0 | 8.8** | 463.8 | 589.5 | 345.4 | 51.0 | 1.000103 |
| 30500.0 | 238.0 | -45.3 | | | 455.7 | 588.0 | 347.0 | 51.1 | 1.000102 |
| 31000.0 | 231.2 | -46.5 | | | 447.5 | 586.6 | 348.6 | 49.9 | 1.000100 |
| 31500.0 | 224.5 | -47.6 | | | 439.4 | 585.1 | 347.6 | 47.6 | 1.000098 |
| 32000.0 | 218.0 | -48.7 | | | 431.5 | 583.6 | 349.4 | 44.7 | 1.000096 |
| 32500.0 | 211.7 | -49.8 | | | 423.8 | 582.2 | 353.5 | 44.3 | 1.000094 |
| 33000.0 | 205.4 | -51.0 | | | 416.2 | 580.7 | 358.5 | 45.9 | 1.000093 |
| 33500.0 | 199.3 | -52.1 | | | 408.7 | 579.2 | 2.1 | 46.6 | 1.000091 |
| 34000.0 | 193.4 | -53.2 | | | 401.4 | 577.7 | 4.8 | 46.4 | 1.000089 |
| 34500.0 | 187.6 | -53.8 | | | 393.1 | 577.0 | 5.1 | 45.4 | 1.000088 |
| 35000.0 | 181.8 | -50.6 | | | 378.5 | 581.2 | 2.2 | 43.1 | 1.000084 |
| 35500.0 | 176.3 | -49.5 | | | 368.1 | 582.6 | 357.5 | 40.1 | 1.000082 |
| 36000.0 | 170.8 | -49.4 | | | 359.3 | 582.8 | 347.4 | 35.4 | 1.000080 |
| 36500.0 | 165.5 | -50.1 | | | 352.2 | 581.9 | 336.4 | 32.2 | 1.000078 |
| 37000.0 | 160.3 | -50.8 | | | 345.2 | 581.0.9 | 331.6 | 30.5 | 1.000077 |
| 37500.0 | 155.3 | -51.5 | | | 338.3 | 580.0 | 327.7 | 29.0 | 1.000075 |
| 38000.0 | 150.3 | -51.8 | | | 331.0 | 579.6 | 329.9 | 27.6 | 1.000074 |
| 38500.0 | 145.4 | -51.2 | | | 322.5 | 580.4 | 332.1 | 26.1 | 1.000072 |
| 39000.0 | 140.7 | -48.4 | | | 311.1 | 584.0 | 329.8 | 23.5 | 1.000069 |
| 39500.0 | 136.2 | -46.7 | | | 301.8 | 586.2 | 328.9 | 20.9 | 1.000067 |
| 40000.0 | 131.7 | -47.5 | | | 295.9 | 585.3 | 324.3 | 19.4 | 1.000066 |
| 40500.0 | 127.3 | -48.2 | | | 290.1 | 584.3 | 321.5 | 18.3 | 1.000065 |
| 41000.0 | 123.0 | -49.0 | | | 284.5 | 583.2 | 318.6 | 17.3 | 1.000063 |
| 41500.0 | 118.8 | -49.8 | | | 278.9 | 582.2 | 315.6 | 16.3 | 1.000062 |
| 42000.0 | 114.8 | -50.6 | | | 273.5 | 581.2 | 312.6 | 15.4 | 1.000061 |
| 42500.0 | 110.8 | -51.4 | | | 268.2 | 580.2 | 307.5 | 14.6 | 1.000060 |
| 43000.0 | 106.8 | -51.0 | | | 261.6 | 580.7 | 302.6 | 13.9 | 1.000058 |
| 43500.0 | 103.0 | -50.5 | | | 255.0 | 581.3 | 298.7 | 13.6 | 1.000057 |
| 44000.0 | 99.2 | -50.6 | | | 249.3 | 581.1 | 294.3 | 13.5 | 1.000056 |
| 44500.0 | 95.6 | -50.9 | | | 243.9 | 580.8 | 288.6 | 14.6 | 1.000054 |
| 45000.0 | 92.0 | -51.2 | | | 238.6 | 580.4 | 282.7 | 15.8 | 1.000053 |
| 45500.0 | 88.5 | -51.7 | | | 233.5 | 579.8 | 274.6 | 14.9 | 1.000052 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 6331.86 FEET MSL
25 APR. 80 0800 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
1160350002
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3 (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 40000.0 | 145.0 | -52.2 | | | 228.7 | 579.0 | 264.3 | 13.8 | 1.000051 |
| 40500.0 | 141.6 | -52.8 | | | 223.9 | 578.3 | 256.4 | 12.4 | 1.000050 |
| 41000.0 | 138.3 | -53.4 | | | 219.3 | 577.5 | 249.7 | 10.6 | 1.000049 |
| 41500.0 | 135.1 | -54.0 | | | 214.7 | 576.8 | 240.3 | 9.1 | 1.000048 |
| 42000.0 | 132.0 | -54.6 | | | 210.3 | 576.0 | 258.7 | 8.4 | 1.000047 |
| 42500.0 | 128.9 | -55.1 | | | 206.0 | 575.2 | 272.4 | 8.2 | 1.000046 |
| 43000.0 | 125.9 | -55.3 | | | 201.3 | 574.9 | 283.0 | 7.8 | 1.000045 |
| 43500.0 | 122.9 | -54.9 | | | 196.2 | 575.5 | 294.2 | 7.8 | 1.000044 |
| 44000.0 | 120.0 | -54.5 | | | 191.3 | 576.0 | 301.5 | 7.7 | 1.000043 |
| 44500.0 | 117.2 | -55.0 | | | 187.2 | 575.4 | 307.2 | 7.6 | 1.000042 |
| 45000.0 | 114.4 | -55.6 | | | 183.2 | 574.8 | 302.2 | 6.3 | 1.000041 |
| 45500.0 | 111.7 | -56.2 | | | 179.4 | 574.2 | 246.4 | 4.3 | 1.000040 |
| 46000.0 | 109.1 | -56.7 | | | 175.6 | 573.1 | 201.0 | 7.3 | 1.000039 |
| 46500.0 | 106.5 | -57.3 | | | 171.9 | 572.4 | 202.6 | 9.2 | 1.000038 |
| 47000.0 | 104.0 | -57.9 | | | 168.3 | 571.8 | 204.1 | 11.0 | 1.000037 |
| 47500.0 | 101.5 | -58.4 | | | 164.8 | 570.9 | 213.3 | 10.7 | 1.000037 |
| 48000.0 | 99.1 | -58.7 | | | 161.1 | 570.5 | 245.1 | 10.5 | 1.000036 |
| 48500.0 | 96.8 | -58.5 | | | 157.1 | 570.8 | 263.6 | 11.9 | 1.000035 |
| 49000.0 | 94.5 | -58.3 | | | 153.2 | 571.0 | 268.9 | 11.8 | 1.000034 |
| 49500.0 | 92.2 | -58.1 | | | 149.4 | 571.3 | 258.0 | 11.8 | 1.000033 |
| 50000.0 | 90.0 | -57.9 | | | 145.7 | 571.5 | 264.6 | 9.8 | 1.000032 |
| 50500.0 | 87.9 | -58.3 | | | 142.5 | 571.1 | 277.0 | 7.6 | 1.000032 |
| 51000.0 | 85.8 | -58.6 | | | 139.3 | 570.8 | 291.9 | 6.2 | 1.000031 |
| 51500.0 | 83.7 | -59.0 | | | 136.2 | 570.1 | 302.2 | 5.3 | 1.000030 |
| 52000.0 | 81.7 | -59.3 | | | 133.1 | 569.7 | 315.8 | 4.6 | 1.000030 |
| 52500.0 | 79.8 | -59.7 | | | 130.2 | 569.2 | 271.3 | 3.7 | 1.000029 |
| 53000.0 | 77.9 | -60.0 | | | 127.3 | 568.7 | 232.8 | 5.2 | 1.000028 |
| 53500.0 | 76.0 | -60.4 | | | 124.4 | 568.2 | 216.4 | 6.2 | 1.000028 |
| 54000.0 | 74.2 | -60.8 | | | 121.6 | 567.8 | 209.1 | 6.5 | 1.000027 |
| 54500.0 | 72.4 | -61.1 | | | 118.9 | 567.3 | 200.2 | 6.6 | 1.000026 |
| 55000.0 | 70.7 | -61.5 | | | 116.3 | 566.8 | 186.4 | 5.7 | 1.000026 |
| 55500.0 | 69.0 | -61.7 | | | 113.6 | 566.5 | 168.8 | 5.2 | 1.000025 |
| 56000.0 | 67.3 | -61.9 | | | 111.0 | 566.2 | 155.3 | 4.6 | 1.000025 |
| 56500.0 | 65.7 | -62.1 | | | 108.4 | 565.9 | 141.7 | 4.1 | 1.000024 |
| 57000.0 | 64.1 | -62.3 | | | 105.9 | 565.7 | 129.7 | 3.9 | 1.000024 |
| 57500.0 | 62.5 | -62.5 | | | 103.4 | 565.4 | 122.2 | 3.8 | 1.000023 |
| 58000.0 | 61.0 | -62.7 | | | 101.0 | 565.1 | 120.6 | 3.6 | 1.000022 |
| 58500.0 | 59.5 | -62.9 | | | 98.6 | 564.9 | 110.4 | 3.4 | 1.000022 |
| 59000.0 | 58.1 | -62.2 | | | 96.0 | 565.8 | 99.3 | 3.3 | 1.000021 |
| 59500.0 | 56.7 | -61.5 | | | 93.4 | 566.6 | 94.9 | 3.4 | 1.000021 |

STATION ALTITUDE 6331.66 FEET MSL
25 APR. 80 0800 HRS MST
ASCENSION NO. 2

UPPER AIR DATA
1160350002
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3 (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 66000.0 | 55.3 | -61.0 | | | 90.8 | 567.5 | 107.6 | 3.8 | 1.000020 |
| 66500.0 | 54.0 | -60.3 | | | 88.4 | 568.3 | 117.3 | 4.4 | 1.000020 |
| 67000.0 | 52.7 | -59.7 | | | 86.0 | 569.2 | 114.3 | 6.4 | 1.000019 |
| 67500.0 | 51.4 | -59.0 | | | 83.7 | 570.0 | 112.6 | 8.5 | 1.000019 |
| 68000.0 | 50.2 | -58.4 | | | 81.5 | 570.9 | 108.6 | 10.1 | 1.000018 |
| 68500.0 | 49.0 | -58.2 | | | 79.4 | 571.2 | 103.9 | 11.4 | 1.000018 |
| 69000.0 | 47.9 | -58.0 | | | 77.5 | 571.5 | 100.2 | 12.8 | 1.000017 |
| 69500.0 | 46.7 | -57.8 | | | 75.6 | 571.7 | 105.7 | 12.5 | 1.000017 |
| 70000.0 | 45.6 | -57.6 | | | 73.7 | 571.9 | 111.4 | 12.4 | 1.000016 |
| 70500.0 | 44.5 | -57.5 | | | 71.9 | 572.2 | 119.3 | 12.1 | 1.000016 |
| 71000.0 | 43.5 | -57.3 | | | 70.2 | 572.4 | 130.6 | 11.9 | 1.000016 |
| 71500.0 | 42.5 | -57.1 | | | 68.5 | 572.6 | 142.4 | 12.1 | 1.000015 |
| 72000.0 | 41.5 | -56.9 | | | 66.8 | 572.9 | 150.7 | 11.2 | 1.000015 |
| 72500.0 | 40.5 | -56.8 | | | 65.2 | 573.1 | 179.2 | 10.9 | 1.000015 |
| 73000.0 | 39.5 | -56.6 | | | 63.6 | 573.3 | 197.3 | 11.6 | 1.000014 |
| 73500.0 | 38.6 | -56.4 | | | 62.0 | 573.5 | 209.1 | 10.0 | 1.000014 |
| 74000.0 | 37.7 | -56.2 | | | 60.5 | 573.8 | 224.2 | 9.0 | 1.000013 |
| 74500.0 | 36.8 | -55.9 | | | 59.0 | 574.2 | 233.9 | 7.7 | 1.000013 |
| 75000.0 | 35.9 | -55.3 | | | 57.5 | 575.0 | 237.9 | 5.6 | 1.000013 |
| 75500.0 | 35.1 | -54.7 | | | 56.0 | 575.8 | 246.3 | 3.6 | 1.000012 |
| 76000.0 | 34.3 | -54.0 | | | 54.5 | 576.7 | 220.2 | 2.3 | 1.000012 |
| 76500.0 | 33.5 | -53.4 | | | 53.1 | 577.5 | 177.5 | 2.3 | 1.000012 |
| 77000.0 | 32.7 | -52.8 | | | 51.7 | 578.4 | 149.1 | 3.6 | 1.000012 |
| 77500.0 | 32.0 | -52.1 | | | 50.4 | 579.2 | | | 1.000011 |
| 78000.0 | 31.2 | -51.5 | | | 49.1 | 580.0 | | | 1.000011 |
| 78500.0 | 30.5 | -50.8 | | | 47.8 | 580.9 | | | 1.000011 |

MANDATORY LEVELS

STATION ALTITUDE 6331.86 FEET MSL
25 APR. 80 0800 HRS MST
ASCENSION NO. 2

1160350002
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 4.

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | WIND DATA DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS |
|---|---|---|---|---|---|---|
| 800.0 | 6428. | 3.9 | -.3 | 74. | 336.8 | 6.3 |
| 750.0 | 8133. | -1.0 | -4.7 | 76. | 24.5 | 10.8 |
| 700.0 | 9927. | -5.4 | -9.1 | 75. | 31.6 | 10.6 |
| 650.0 | 11825. | -8.4 | -11.9 | 76. | 7.7 | 17.9 |
| 600.0 | 13861. | -9.3 | -18.9 | 46. | 355.0 | 25.1 |
| 550.0 | 16054. | -12.9 | -20.6 | 52. | 352.3 | 27.8 |
| 500.0 | 18417. | -17.4 | -26.2 | 46. | 352.9 | 35.3 |
| 450.0 | 20979. | -23.0 | -28.8 | 59. | 359.2 | 39.9 |
| 400.0 | 23780. | -29.1 | -36.6 | 48. | 358.8 | 47.2 |
| 350.0 | 26862. | -36.7 | -45.2 | 40. | 333.0 | 46.5 |
| 300.0 | 30303. | -45.0 | | | 347.1 | 51.5 |
| 250.0 | 34223. | -53.0 | | | 6.3 | 46.4 |
| 200.0 | 38990. | -47.6 | | | 329.5 | 25.1 |
| 175.0 | 41874. | -50.5 | | | 312.3 | 15.5 |
| 150.0 | 45166. | -51.4 | | | 278.9 | 15.5 |
| 125.0 | 49013. | -55.2 | | | 285.9 | 7.8 |
| 100.0 | 53663. | -58.8 | | | 234.4 | 10.3 |
| 80.0 | 58264. | -59.7 | | | 278.7 | 5.7 |
| 70.0 | 60991. | -61.6 | | | 180.7 | 5.4 |
| 60.0 | 64116. | -62.8 | | | 122.1 | 5.5 |
| 50.0 | 67338. | -58.3 | | | 106.2 | 10.3 |
| 40.0 | 72463. | -56.7 | | | 107.9 | 11.2 |
| 30.0 | 78519. | -50.4 | | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

SIGNIFICANT LEVEL DATA
11600301Z5
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 5.

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|---|---|---|---|---|
| 873.6 | 4051.0 | 9.5 | 4.1 | 69.0 |
| 863.7 | 4360.9 | 7.7 | 1.5 | 65.0 |
| 850.0 | 4792.6 | 5.9 | -.8 | 62.0 |
| 817.4 | 5842.7 | 4.7 | -1.7 | 63.0 |
| 794.2 | 6611.4 | 2.7 | -3.2 | 65.0 |
| 747.6 | 8209.2 | -.9 | -4.4 | 77.0 |
| 709.0 | 9595.4 | -3.0 | -7.9 | 69.0 |
| 700.0 | 9927.9 | -3.4 | -9.8 | 62.0 |
| 690.0 | 10301.9 | -3.4 | -11.8 | 53.0 |
| 652.6 | 11742.7 | -6.3 | -14.5 | 52.0 |
| 625.4 | 12836.2 | -6.9 | -16.3 | 47.0 |
| 572.4 | 15093.8 | -10.3 | -17.6 | 55.0 |
| 564.0 | 15468.1 | -10.6 | -17.4 | 57.0 |
| 535.8 | 16757.0 | -14.3 | -17.3 | 78.0 |
| 511.2 | 17924.4 | -16.7 | -19.3 | 80.0 |
| 500.0 | 18471.4 | -17.3 | -20.8 | 74.0 |
| 489.2 | 19009.6 | -17.6 | -23.1 | 62.0 |
| 473.6 | 19805.2 | -19.3 | -27.7 | 47.0 |
| 418.1 | 22811.3 | -26.5 | -33.8 | 51.0 |
| 400.0 | 23857.0 | -29.5 | -39.0 | 39.0 |
| 370.8 | 25622.1 | -33.6 | -42.9 | 38.0 |
| 350.4 | 26919.3 | -37.1 | -43.5 | 51.0 |
| 317.8 | 29114.8 | -42.8 | -49.5 | 47.0 |
| 300.0 | 30383.9 | -46.8 | | |
| 281.2 | 31790.8 | -48.6 | | |
| 253.0 | 34049.8 | -54.4 | | |
| 250.0 | 34301.7 | -54.0 | | |
| 242.2 | 34975.9 | -51.3 | | |
| 226.4 | 36413.5 | -53.2 | | |
| 200.0 | 39068.2 | -49.3 | | |
| 183.2 | 40954.8 | -51.4 | | |
| 178.8 | 41475.0 | -51.5 | | |
| 157.8 | 44133.9 | -53.9 | | |
| 150.0 | 45209.4 | -52.9 | | |
| 145.8 | 45814.1 | -52.4 | | |
| 120.6 | 49935.1 | -55.1 | | |
| 100.0 | 53746.0 | -59.0 | | |
| 86.4 | 56771.6 | -59.0 | | |
| 83.6 | 57453.8 | -58.9 | | |
| 70.0 | 61090.6 | -63.7 | | |

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

SIGNIFICANT LEVEL DATA
116003015
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 5 (continued)

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|---|---|---|---|---|
| 65.6 | 62415.0 | -60.7 | | |
| 55.6 | 65802.0 | -62.2 | | |
| 53.2 | 66705.0 | -61.1 | | |
| 50.0 | 67978.1 | -61.0 | | |
| 46.2 | 69620.1 | -56.0 | | |
| 44.0 | 70648.4 | -54.8 | | |
| 37.0 | 74293.5 | -56.9 | | |
| 30.0 | 78734.5 | -52.1 | | |

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

UPPER AIR DATA
1160030125
JALLEN

TABLE 6.

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 4051.0 | 873.6 | 9.5 | 4.1 | 69.0 | 1072.9 | 656.1 | 10.0 | 2.9 | 1.000278 |
| 4500.0 | 859.3 | 7.1 | .8 | 64.0 | 1065.0 | 653.1 | 7.1 | 3.5 | 1.000269 |
| 5000.0 | 843.5 | 5.7 | -1.0 | 62.2 | 1051.2 | 651.3 | 4.8 | 4.1 | 1.000262 |
| 5500.0 | 827.9 | 5.1 | -1.4 | 62.7 | 1033.9 | 650.7 | 3.1 | 4.8 | 1.000257 |
| 6000.0 | 812.6 | 4.3 | -2.0 | 63.4 | 1017.8 | 649.7 | 356.7 | 5.4 | 1.000253 |
| 6500.0 | 797.5 | 3.0 | -3.0 | 64.7 | 1003.8 | 646.1 | 348.5 | 6.2 | 1.000248 |
| 7000.0 | 782.6 | 1.8 | -3.5 | 67.9 | 989.2 | 646.8 | 346.4 | 7.7 | 1.000244 |
| 7500.0 | 767.9 | .7 | -3.8 | 71.7 | 974.7 | 645.4 | 348.8 | 9.4 | 1.000240 |
| 8000.0 | 753.5 | -.4 | -4.2 | 75.4 | 960.4 | 644.1 | 353.7 | 11.7 | 1.000237 |
| 8500.0 | 739.3 | -1.3 | -5.1 | 75.3 | 945.5 | 643.0 | 356.7 | 13.7 | 1.000232 |
| 9000.0 | 725.3 | -2.1 | -6.4 | 72.4 | 930.4 | 642.0 | 356.7 | 15.6 | 1.000227 |
| 9500.0 | 711.6 | -2.9 | -7.6 | 69.6 | 915.4 | 641.1 | 358.7 | 16.5 | 1.000222 |
| 10000.0 | 698.1 | -3.4 | -10.0 | 60.3 | 900.1 | 640.3 | 356.1 | 17.0 | 1.000215 |
| 10500.0 | 684.7 | -3.8 | -12.0 | 52.9 | 884.4 | 639.6 | 350.1 | 16.9 | 1.000210 |
| 11000.0 | 671.6 | -4.8 | -13.0 | 52.5 | 870.8 | 638.6 | 344.6 | 17.9 | 1.000206 |
| 11500.0 | 658.8 | -5.8 | -14.0 | 52.2 | 857.4 | 637.4 | 340.3 | 19.6 | 1.000202 |
| 12000.0 | 646.1 | -6.4 | -14.9 | 50.8 | 843.0 | 636.6 | 338.2 | 21.9 | 1.000198 |
| 12500.0 | 633.6 | -6.7 | -15.7 | 48.5 | 827.6 | 636.2 | 337.4 | 24.2 | 1.000194 |
| 13000.0 | 621.4 | -7.1 | -16.4 | 47.6 | 813.0 | 635.7 | 334.9 | 26.0 | 1.000190 |
| 13500.0 | 609.3 | -7.9 | -16.6 | 49.4 | 799.4 | 634.8 | 331.7 | 27.5 | 1.000187 |
| 14000.0 | 597.5 | -8.7 | -16.9 | 51.1 | 786.1 | 633.9 | 329.1 | 28.6 | 1.000184 |
| 14500.0 | 585.9 | -9.4 | -17.2 | 52.9 | 773.1 | 633.0 | 328.8 | 29.6 | 1.000181 |
| 15000.0 | 574.5 | -10.2 | -17.5 | 54.7 | 760.2 | 632.1 | 325.9 | 30.5 | 1.000178 |
| 15500.0 | 563.3 | -10.7 | -17.4 | 57.5 | 746.9 | 631.5 | 324.8 | 31.4 | 1.000175 |
| 16000.0 | 552.2 | -12.1 | -17.2 | 65.7 | 736.2 | 629.8 | 323.3 | 32.5 | 1.000173 |
| 16500.0 | 541.3 | -13.6 | -17.2 | 73.8 | 725.6 | 628.0 | 321.7 | 33.5 | 1.000171 |
| 17000.0 | 530.6 | -14.8 | -17.7 | 78.4 | 714.7 | 626.5 | 319.7 | 34.1 | 1.000168 |
| 17500.0 | 520.0 | -15.8 | -18.6 | 79.3 | 703.3 | 625.3 | 319.2 | 35.0 | 1.000165 |
| 18000.0 | 509.6 | -16.8 | -19.5 | 79.2 | 691.9 | 624.1 | 321.2 | 36.4 | 1.000162 |
| 18500.0 | 499.4 | -17.3 | -20.9 | 73.4 | 679.5 | 623.4 | 323.9 | 37.7 | 1.000156 |
| 19000.0 | 489.4 | -17.6 | -23.0 | 62.2 | 666.6 | 623.0 | 327.6 | 38.9 | 1.000154 |
| 19500.0 | 479.5 | -18.6 | -25.9 | 52.8 | 656.0 | 621.7 | 330.0 | 39.9 | 1.000150 |
| 20000.0 | 469.8 | -19.8 | -28.1 | 47.3 | 645.6 | 620.3 | 330.3 | 40.2 | 1.000147 |
| 20500.0 | 460.2 | -21.0 | -29.1 | 47.9 | 635.4 | 618.8 | 330.2 | 40.1 | 1.000145 |
| 21000.0 | 450.7 | -22.2 | -30.0 | 48.6 | 625.3 | 617.3 | 329.4 | 39.6 | 1.000142 |
| 21500.0 | 441.5 | -23.4 | -31.0 | 49.3 | 615.4 | 615.8 | 328.4 | 39.4 | 1.000140 |
| 22000.0 | 432.4 | -24.6 | -32.0 | 49.9 | 605.7 | 614.4 | 327.3 | 39.4 | 1.000137 |
| 22500.0 | 423.5 | -25.8 | -32.9 | 50.6 | 596.2 | 612.9 | 325.6 | 40.2 | 1.000135 |
| 23000.0 | 414.8 | -27.0 | -34.5 | 48.8 | 586.9 | 611.3 | 323.3 | 41.0 | 1.000133 |
| 23500.0 | 406.1 | -28.5 | -37.1 | 43.1 | 578.1 | 609.5 | 321.9 | 41.6 | 1.000130 |

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

UPPER AIR DATA
116003125
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 6. (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 24000.0 | 397.6 | -29.8 | -39.3 | 38.9 | 569.1 | 607.7 | 320.4 | 42.0 | 1.000128 |
| 24500.0 | 389.1 | -31.0 | -40.4 | 38.6 | 559.7 | 606.3 | 319.5 | 41.9 | 1.000126 |
| 25000.0 | 380.8 | -32.2 | -41.5 | 38.4 | 550.4 | 604.8 | 320.2 | 41.4 | 1.000124 |
| 25500.0 | 372.8 | -33.3 | -42.7 | 38.1 | 541.4 | 603.4 | 322.5 | 40.6 | 1.000121 |
| 26000.0 | 364.7 | -34.6 | -43.0 | 41.8 | 532.6 | 601.7 | 324.9 | 40.1 | 1.000120 |
| 26500.0 | 356.9 | -36.0 | -43.2 | 46.8 | 524.1 | 600.0 | 327.4 | 40.0 | 1.000118 |
| 27000.0 | 349.1 | -37.3 | -43.7 | 50.9 | 515.7 | 598.3 | 329.0 | 40.1 | 1.000116 |
| 27500.0 | 341.5 | -38.6 | -45.1 | 49.9 | 507.1 | 596.7 | 315.2 | 41.2 | 1.000114 |
| 28000.0 | 334.0 | -39.9 | -46.5 | 49.0 | 498.7 | 595.0 | 306.7 | 42.5 | 1.000112 |
| 28500.0 | 326.6 | -41.2 | -47.8 | 48.1 | 490.5 | 593.3 | 303.2 | 44.1 | 1.000110 |
| 29000.0 | 319.4 | -42.5 | -49.2 | 47.2 | 482.4 | 591.7 | 302.8 | 44.0 | 1.000108 |
| 29500.0 | 312.3 | -44.0 | -53.7 | 32.7** | 474.6 | 590.7 | 306.2 | 42.5 | 1.000106 |
| 30000.0 | 305.3 | -45.6 | -61.6 | 14.2** | 467.3 | 587.7 | 310.7 | 41.2 | 1.000104 |
| 30500.0 | 298.4 | -46.9 | | | 459.6 | 585.9 | 316.3 | 40.3 | 1.000102 |
| 31000.0 | 291.6 | -47.6 | | | 450.4 | 585.1 | 322.3 | 39.9 | 1.000100 |
| 31500.0 | 285.0 | -48.2 | | | 441.4 | 584.3 | 326.7 | 40.1 | 1.000098 |
| 32000.0 | 278.5 | -49.1 | | | 433.0 | 583.1 | 334.7 | 40.8 | 1.000096 |
| 32500.0 | 272.0 | -50.4 | | | 425.5 | 581.4 | 340.0 | 41.9 | 1.000095 |
| 33000.0 | 265.7 | -51.7 | | | 418.0 | 579.7 | 344.9 | 43.2 | 1.000093 |
| 33500.0 | 259.6 | -53.0 | | | 410.8 | 578.1 | 348.3 | 43.5 | 1.000091 |
| 34000.0 | 253.6 | -54.3 | | | 403.6 | 576.4 | 351.5 | 43.9 | 1.000090 |
| 34500.0 | 247.7 | -53.2 | | | 392.3 | 577.8 | 345.8 | 38.7 | 1.000087 |
| 35000.0 | 241.9 | -51.3 | | | 379.9 | 580.2 | 337.0 | 33.4 | 1.000085 |
| 35500.0 | 236.3 | -52.0 | | | 372.2 | 579.4 | 329.3 | 30.6 | 1.000083 |
| 36000.0 | 230.8 | -52.7 | | | 364.7 | 578.5 | 312.0 | 29.5 | 1.000081 |
| 36500.0 | 225.5 | -53.1 | | | 356.9 | 577.9 | 313.0 | 30.0 | 1.000079 |
| 37000.0 | 220.3 | -52.3 | | | 347.5 | 578.9 | 317.6 | 30.9 | 1.000077 |
| 37500.0 | 215.2 | -51.6 | | | 338.4 | 579.9 | 319.2 | 29.9 | 1.000075 |
| 38000.0 | 210.2 | -50.9 | | | 329.5 | 580.8 | 317.9 | 27.0 | 1.000073 |
| 38500.0 | 205.4 | -50.1 | | | 320.8 | 581.8 | 315.3 | 24.2 | 1.000071 |
| 39000.0 | 200.6 | -49.4 | | | 312.4 | 582.7 | 305.6 | 22.3 | 1.000070 |
| 39500.0 | 196.0 | -49.8 | | | 305.7 | 582.2 | 294.3 | 21.1 | 1.000068 |
| 40000.0 | 191.5 | -50.3 | | | 299.4 | 581.5 | 288.9 | 21.4 | 1.000067 |
| 40500.0 | 187.1 | -50.9 | | | 293.3 | 580.6 | 286.0 | 22.2 | 1.000065 |
| 41000.0 | 182.8 | -51.4 | | | 287.2 | 580.1 | 284.3 | 22.6 | 1.000064 |
| 41500.0 | 178.6 | -51.5 | | | 280.7 | 580.0 | 285.5 | 22.2 | 1.000063 |
| 42000.0 | 174.4 | -52.0 | | | 274.8 | 579.4 | 286.7 | 21.8 | 1.000061 |
| 42500.0 | 170.4 | -52.4 | | | 268.9 | 578.8 | 289.9 | 22.0 | 1.000060 |
| 43000.0 | 166.4 | -52.9 | | | 263.2 | 578.2 | 293.6 | 22.3 | 1.000059 |
| 43500.0 | 162.6 | -53.3 | | | 257.6 | 577.6 | 296.4 | 22.3 | 1.000057 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

UPPER AIR DATA
116003012
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 6 (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 44000.0 | 158.8 | -53.8 | | | 252.2 | 577.0 | 290.7 | 21.1 | 1.000056 |
| 44500.0 | 155.1 | -53.6 | | | 246.1 | 577.3 | 297.1 | 20.0 | 1.000055 |
| 45000.0 | 151.5 | -53.1 | | | 239.8 | 577.9 | 296.3 | 17.3 | 1.000053 |
| 45500.0 | 148.0 | -52.7 | | | 233.8 | 578.5 | 294.6 | 14.2 | 1.000052 |
| 46000.0 | 144.5 | -52.5 | | | 228.2 | 578.7 | 291.1 | 11.3 | 1.000051 |
| 46500.0 | 141.2 | -52.9 | | | 223.2 | 578.2 | 283.1 | 8.9 | 1.000050 |
| 47000.0 | 137.9 | -53.2 | | | 218.4 | 577.8 | 269.7 | 6.8 | 1.000049 |
| 47500.0 | 134.6 | -53.5 | | | 213.6 | 577.5 | 265.1 | 7.2 | 1.000048 |
| 48000.0 | 131.5 | -53.9 | | | 208.9 | 576.9 | 262.3 | 7.8 | 1.000047 |
| 48500.0 | 128.4 | -54.2 | | | 204.4 | 576.5 | 262.3 | 8.5 | 1.000046 |
| 49000.0 | 125.4 | -54.5 | | | 199.9 | 576.0 | 265.9 | 9.3 | 1.000045 |
| 49500.0 | 122.5 | -54.9 | | | 195.5 | 575.6 | 268.6 | 10.2 | 1.000044 |
| 50000.0 | 119.7 | -55.3 | | | 191.3 | 575.1 | 272.1 | 11.0 | 1.000043 |
| 50500.0 | 116.8 | -55.8 | | | 187.2 | 574.4 | 275.0 | 11.9 | 1.000042 |
| 51000.0 | 114.1 | -56.3 | | | 183.2 | 573.7 | 275.3 | 12.3 | 1.000041 |
| 51500.0 | 111.4 | -56.8 | | | 179.3 | 573.1 | 268.0 | 11.3 | 1.000040 |
| 52000.0 | 108.7 | -57.3 | | | 175.4 | 572.4 | 255.3 | 10.7 | 1.000039 |
| 52500.0 | 106.1 | -57.8 | | | 171.7 | 571.8 | 237.4 | 10.1 | 1.000038 |
| 53000.0 | 103.6 | -58.3 | | | 168.0 | 571.1 | 214.3 | 10.8 | 1.000037 |
| 53500.0 | 101.2 | -58.8 | | | 164.4 | 570.4 | 196.3 | 12.8 | 1.000037 |
| 54000.0 | 98.8 | -59.0 | | | 160.7 | 570.1 | 197.1 | 13.4 | 1.000036 |
| 54500.0 | 96.4 | -59.0 | | | 156.9 | 570.1 | 200.7 | 13.6 | 1.000035 |
| 55000.0 | 94.1 | -59.0 | | | 153.1 | 570.1 | 204.3 | 13.6 | 1.000034 |
| 55500.0 | 91.9 | -59.0 | | | 149.5 | 570.1 | 207.7 | 12.6 | 1.000033 |
| 56000.0 | 89.7 | -59.0 | | | 145.9 | 570.1 | 212.0 | 11.4 | 1.000032 |
| 56500.0 | 87.5 | -59.0 | | | 142.4 | 570.1 | 213.5 | 9.9 | 1.000032 |
| 57000.0 | 85.5 | -59.0 | | | 139.0 | 570.1 | 205.2 | 7.6 | 1.000031 |
| 57500.0 | 83.4 | -59.0 | | | 135.7 | 570.2 | 190.3 | 5.6 | 1.000030 |
| 58000.0 | 81.4 | -59.6 | | | 132.8 | 569.3 | 174.9 | 4.4 | 1.000030 |
| 58500.0 | 79.4 | -60.3 | | | 130.0 | 568.4 | 162.0 | 3.6 | 1.000029 |
| 59000.0 | 77.5 | -60.9 | | | 127.3 | 567.5 | 144.7 | 3.0 | 1.000028 |
| 59500.0 | 75.7 | -61.6 | | | 124.6 | 566.6 | 104.2 | 2.8 | 1.000028 |
| 60000.0 | 73.8 | -62.3 | | | 122.0 | 565.7 | 192.2 | 3.2 | 1.000027 |
| 60500.0 | 72.0 | -62.9 | | | 119.4 | 564.9 | 210.3 | 4.2 | 1.000027 |
| 61000.0 | 70.3 | -63.6 | | | 116.9 | 564.0 | 213.0 | 4.3 | 1.000026 |
| 61500.0 | 68.6 | -62.8 | | | 113.6 | 563.1 | 215.6 | 4.2 | 1.000025 |
| 62000.0 | 66.9 | -61.6 | | | 110.3 | 562.6 | 217.7 | 4.2 | 1.000025 |
| 62500.0 | 65.3 | -60.7 | | | 107.1 | 562.8 | 206.4 | 1.4 | 1.000024 |
| 63000.0 | 63.8 | -61.0 | | | 104.7 | 562.5 | 57.1 | 1.6 | 1.000023 |
| 63500.0 | 62.2 | -61.2 | | | 102.2 | 562.2 | 48.6 | 4.9 | 1.000023 |

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

UPPER AIR DATA
1160030125
JALLEN

GEODETIC COORDINATES
33.10712 LAT DEG
106.49511 LON DEG

TABLE 6 (continued)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|---|---|---|---|---|---|---|---|---|---|
| 64000.0 | 60.7 | -61.4 | | | 99.9 | 566.9 | 39.9 | 6.2 | 1.000022 |
| 64500.0 | 59.2 | -61.6 | | | 97.6 | 566.6 | 33.7 | 7.5 | 1.000022 |
| 65000.0 | 57.8 | -61.8 | | | 95.3 | 566.3 | 29.6 | 6.7 | 1.000021 |
| 65500.0 | 56.4 | -62.1 | | | 93.1 | 566.0 | 29.7 | 7.6 | 1.000021 |
| 66000.0 | 55.1 | -62.0 | | | 90.8 | 566.2 | 29.9 | 6.4 | 1.000020 |
| 66500.0 | 53.7 | -61.3 | | | 88.4 | 567.0 | 30.5 | 5.3 | 1.000020 |
| 67000.0 | 52.4 | -61.1 | | | 86.1 | 567.3 | 33.1 | 4.5 | 1.000019 |
| 67500.0 | 51.2 | -61.0 | | | 84.1 | 567.4 | 37.0 | 3.7 | 1.000019 |
| 68000.0 | 49.9 | -60.9 | | | 82.0 | 567.5 | 40.9 | 3.1 | 1.000018 |
| 68500.0 | 48.8 | -59.4 | | | 79.5 | 569.0 | 67.5 | 3.2 | 1.000018 |
| 69000.0 | 47.6 | -57.9 | | | 77.0 | 571.6 | 84.7 | 3.7 | 1.000017 |
| 69500.0 | 46.5 | -56.4 | | | 74.7 | 573.6 | 98.4 | 5.5 | 1.000017 |
| 70000.0 | 45.4 | -55.0 | | | 72.6 | 574.7 | 104.9 | 9.2 | 1.000016 |
| 70500.0 | 44.3 | -55.0 | | | 70.8 | 575.4 | 107.6 | 12.9 | 1.000016 |
| 71000.0 | 43.3 | -55.0 | | | 69.1 | 575.4 | 111.2 | 15.5 | 1.000015 |
| 71500.0 | 42.3 | -55.3 | | | 67.6 | 575.0 | 116.5 | 16.8 | 1.000015 |
| 72000.0 | 41.3 | -55.6 | | | 66.1 | 574.6 | 120.9 | 18.1 | 1.000015 |
| 72500.0 | 40.3 | -55.9 | | | 64.6 | 574.3 | 125.7 | 17.2 | 1.000014 |
| 73000.0 | 39.3 | -56.2 | | | 63.2 | 573.9 | 133.1 | 14.2 | 1.000014 |
| 73500.0 | 38.4 | -56.4 | | | 61.8 | 573.5 | 144.1 | 11.6 | 1.000014 |
| 74000.0 | 37.5 | -56.7 | | | 60.4 | 573.1 | 155.7 | 8.9 | 1.000013 |
| 74500.0 | 36.6 | -56.7 | | | 59.0 | 573.2 | 157.7 | 5.7 | 1.000013 |
| 75000.0 | 35.8 | -56.1 | | | 57.4 | 573.9 | 171.8 | 2.5 | 1.000013 |
| 75500.0 | 35.0 | -55.6 | | | 56.0 | 574.6 | 203.5 | 1.1 | 1.000012 |
| 76000.0 | 34.1 | -55.1 | | | 54.5 | 575.3 | 203.8 | .7 | 1.000012 |
| 76500.0 | 33.3 | -54.5 | | | 53.1 | 576.0 | 157.0 | 1.3 | 1.000012 |
| 77000.0 | 32.6 | -54.0 | | | 51.8 | 576.8 | 142.9 | 2.2 | 1.000012 |
| 77500.0 | 31.8 | -53.4 | | | 50.4 | 577.5 | | | 1.000011 |
| 78000.0 | 31.1 | -52.9 | | | 49.1 | 578.2 | | | 1.000011 |
| 78500.0 | 30.3 | -52.4 | | | 47.9 | 578.9 | | | 1.000011 |

STATION ALTITUDE 4051.00 FEET MSL
25 APR. 80 0755 HRS MST
ASCENSION NO. 125

MANDATORY LEVELS
1160030125
JALLEN

GEODETIC COORDINATES
35.16712 LAT DEG
106.49511 LON DEG

TABLE 7.

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | TEMPERATURE DEWPOINT CENTIGRADE | REL.HUM. PERCENT | WIND DATA DIRECTION DEGREES(N) | WIND DATA SPEED KNOTS |
|---|---|---|---|---|---|---|
| 850.0 | 4789. | 5.9 | -.8 | 62. | 5.7 | 3.9 |
| 800.0 | 6413. | 3.2 | -2.8 | 64. | 348.0 | 0.1 |
| 750.0 | 8118. | -.7 | -4.3 | 76. | 354.6 | 12.2 |
| 700.0 | 9919. | -3.4 | -9.6 | 62. | 357.0 | 17.0 |
| 650.0 | 11834. | -6.4 | -14.7 | 52. | 338.5 | 21.2 |
| 600.0 | 13882. | -8.5 | -16.8 | 51. | 329.0 | 28.4 |
| 550.0 | 16083. | -12.4 | -17.2 | 67. | 323.1 | 32.7 |
| 500.0 | 18447. | -17.3 | -20.8 | 74. | 323.6 | 37.6 |
| 450.0 | 21018. | -22.3 | -30.1 | 49. | 329.4 | 39.5 |
| 400.0 | 23819. | -29.5 | -39.0 | 39. | 320.6 | 42.0 |
| 350.0 | 26899. | -37.2 | -43.5 | 51. | 324.0 | 40.1 |
| 300.0 | 30327. | -46.8 | | | 314.3 | 40.5 |
| 250.0 | 34231. | -54.0 | | | 346.8 | 41.1 |
| 200.0 | 38978. | -49.3 | | | 304.5 | 22.1 |
| 175.0 | 41832. | -51.9 | | | 288.4 | 21.9 |
| 150.0 | 45092. | -52.9 | | | 295.8 | 10.1 |
| 125.0 | 48943. | -54.6 | | | 200.2 | 3.4 |
| 100.0 | 53585. | -59.0 | | | 195.0 | 13.3 |
| 80.0 | 58175. | -60.1 | | | 167.2 | 3.8 |
| 70.0 | 60880. | -63.7 | | | 213.9 | 4.3 |
| 60.0 | 64020. | -61.5 | | | 37.0 | 0.8 |
| 50.0 | 67726. | -61.0 | | | 44.7 | 3.1 |
| 40.0 | 72374. | -56.0 | | | 127.3 | 10.4 |
| 30.0 | 78404. | -52.1 | | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.